

ENVIRONMENTAL HISTORY: METHODOLOGIES AND THEIR INTERACTIONS

TANNISTHA BANERJEE

M.A. Graduate in History, Lady Shri Ram College, University of Delhi, Delhi, India

ABSTRACT

Over the centuries, historians and scientists around the globe have targeted intensively on getting to know and recording the micro and macro developments of the environmental records of numerous geographical areas, cultures on the subject of several components of nature that contain people. Yet, no exact methodology, epistemology or even theory has encompassed from those research contributions, which had been and are being performed inside disciplinary and on occasion interdisciplinary frameworks. However what it gave upward push to is a transdisciplinary research approach, at the least as practiced with the aid of using historians. This article discusses the 4 sides of the transdisciplinary research approach on international environmental records namely, 'nature, interdisciplinarity, way of life forging, and go boundaries' accompanied with the aid of using 3 case research on Easter Island, Mesopotamia and Petra, highlighting the interaction between each of these facets and their influence over the history of that geographical area. It is likewise anticipated that this dialogue will invigorate the mind on studies co-operation with the social sciences and humanities, in addition to collaboration with non-associated sciences in environmental records.

KEYWORDS: *Nature, Interdisciplinarity, Culture Forging, Cross Boundaries, Mysterious Alignment*

Received: Dec 27, 2021; **Accepted:** Jan 17, 2022; **Published:** Feb 12, 2022; **Paper Id.:** IJHRJUN20224

INTRODUCTION

The telematic debate at the theme “Global History and Global Policies” has supplied historians from exceptional historiographic traditions and remote countries – Piero Bevilacqua, Guillermo Castro, Ranjan Chakrabarti, Gabriella Corona, Kobus du Pisani, John McNeill, Donald Worster – with a possibility to examine perspectives at the exceptional interpretive paradigms of worldwide environmental records. A huge variety of topics have been covered - the definition of the discipline’s subject of research; subject matters and chronological scope; the connection among neighborhood and international; the function of the West in records and historiography; the attitude of the dominated; the discipline’s function in coverage making; and its dating with the natural sciences. The dialogue has yielded a wealthy harvest of reflections on international environmental records as a paradigm for the translation of the past and a cultural and political tool for movement within the present. Important indicators have emerged as regards to the technique of the global environmental historian can comply with to make contributions on this subject of studies.

ESSENTIAL ELEMENTS OF GLOBAL ENVIRONMENTAL HISTORY

The four essential elements of this approach can be enumerated as – ‘Nature, Interdisciplinarity, Culture forging, Cross Boundaries’. They have been elaborated further –

- **Nature** - The first crucial detail of worldwide environmental records is nature. 'Nature' can refer to the phenomena of the physical world, and to life in general. Although people are part of nature, human interest is frequently understood as a separate class from different natural phenomena. With the industrial

revolution, nature was considered more as a part of reality deprived from intentional intervention: it became consequently taken into consideration as sacred with the aid of using a few traditions or a trifling decorum for divine power or human history. However, a vitalist, imaginative and prescient of nature nearer to the presocratic one, got reborn at the same time, especially after Charles Darwin. Environmental History is the study of human interaction with the natural world over time, emphasizing the active role nature plays in influencing human affairs and vice versa. Nature has played the role of a catalyst in changing the social, political, and economic conditions of a country. There is a possibility of cultural encounters with nature.

- **Interdisciplinarity** - Interdisciplinarity or interdisciplinary studies involve the combining of two or more academic disciplines into one activity. It draws knowledge from several other fields like sociology, anthropology, psychology, economics etc. It is about creating something by thinking across boundaries combining interdisciplinary approaches with perspectives from the new field of Global studies, emerging is inclusive argue that what in a coherent, accessible and paradigm that called global transdisciplinary framework. The framework makes it possible to study multifaceted global scale issues in a holistic fashion, deploying various perspectives at multiple levels and across spatial and temporal dimensions. The framework also intentionally includes previously marginalized perspectives and epistemologies in the production of new knowledge. "The term interdisciplinary is applied within education and training pedagogies to describe studies that use methods and insights of several established disciplines are traditional fields of study. The epidemiology of HIV/AIDS or global warming requires an understanding of diverse disciplines to solve complex problems. Interdisciplinarity may be applied where the subject is felt to have been neglected or even misrepresented in the traditional disciplinary structure of research institutions, for example, women's studies or ethnic area studies.
- **Culture Forging** - The other very important element in forging two cultures of science and arts. Culture is the lifeblood of a vibrant society, expressed in the many ways we tell our stories, celebrate, remember the past, entertain ourselves, and imagine the future. Science and subjects of humanities are interrelated. Historians have used data from scientists in their research works about the past. It is important to note that historians use the conclusion from scientific analyses to write their context. It is a blend of humanity and science, altogether the field of analysis and data, currents on tides, winds, geology, etc. Along with scientific tools such as proxy records, pollen analysis, paleological ocean Study of fossils, Radiometric methods (carbon-14 dating), dendrochronology, paleomagnetismetc.
- **Cross boundaries** - The greatest success of Environmental History is marked in the research where it moves easily across national boundaries. Environmental History cannot flourish in restricted mobility. The environmental history flourished with a new post nationalist synthesis. Three countries i.e. Britain, France and U.S all failed to bring together all the approaches in inquiry and this demonstrates the reality of national difference by here grounds among the different nations and are historical issues sharing requires to address altogether. The vernacular common professionalism has become the patent tool of study. Environmental History, which is global and local at the same time and includes short- and long-term processes, goes beyond boundaries and the time scale is not limited. The research focused on singular localities and a short span of time, don't provide reliable evidence to reconstruct an Environmental History. A comparative set of reasons is vital to construct a more reliable picture of general developments and environmental changes.

CASE STUDIES AND MYSTERIOUS ALIGNMENTS

A few case studies have been discussed below. These studies provide a comprehensive and detailed analysis of different locations and the effect of people on the environment.

- Easter Island - Easter Island is an island located in the South-eastern Pacific Ocean exactly on the extreme south-eastern of the Polynesian Triangle in Oceania. Easter Island is well-known for its early 1,000 extant enormous statues, known as moai created by the early Rapa Nui people. Polynesian population created a thriving and industrious culture, as evidenced through the island's several full-size stone moai and different artifacts. However, land clearing for cultivation and the creation of the Polynesian rat caused sluggish deforestation and that is how nature performed a critical function in making culture. The island's population was approximately 2000-3000 during the time of arrival of Europeans. Cross limitations have been additionally affected on the alternative hand. European diseases, Peruvian slave-raiding expeditions with inside the 1860s, and emigration to different islands, e.g., Tahiti, similarly depleted the populace, lowering it to a low of 111 local population in 1877. Chile annexed Easter Island in 1888 and in 1966, the Rapa Nui have been granted Chilean citizenship.
- **Effect of people on the environment at Easter Island** - The surroundings offers an array of sources to be had to be used or appreciated. However, converting factors of this shape consisting of doing away with timber can result in consequences. It is inhabited in spite of its desolate nature, and the lives of this populace display how aid use is critical to the survival of, each of the human beings residing there and the environment itself. Part of the issue in residing on Easter Island became the preliminary shortage of sources earlier than people started inhabiting the island. High temperatures and humidity coupled with horrific drainage and no permanent streams made the island ill-applicable for farming. The remoted nature of the island did now no longer a suitable environment for plant and animal species to exist there. Few vegetation apart from the non-extensive sweet potato gave plenty of unfastened time to the citizens. The stone statues, a number of which have been aligned to astronomical positions, fed on plenty of the peasant labor. Without workhorse animals, the stone blocks for the statues had to be carried through human beings. When the society collapsed at its peak, half of the stone statues have been completed, displaying that the prevalence of a surprising occasion had affected plenty of the population. The loss of timber cascaded into inflicting issues for different areas. Timber houses may want to not be constructed so citizens started to stay in caves. Canoes able to travel long distances as compared to reed boats additionally couldn't be built because of the deforestation. Ground erosion improved which made crop production diminish to the point wherein chickens have been the only meals sustenance for the island. This amount supply of meals couldn't enough for the 7,000 human beings on the island due to which the populace started to decline. So, these are the internal factors that played an important factor in declining Rapa Nui. There is another argument regarding this topic. An external factor like the European intervention was also responsible for the decline of Rapa Nui.
- Mesopotamia- Located in South western Asia, Mesopotamia is in which the world's earliest civilization had developed. The name comes from a Greek phrase meaning "among rivers", relating to the land among the Tigris and Euphrates rivers. Mesopotamia is, geologically speaking, a trough created because the Arabian protect had driven up towards the Asiatic landmass, elevating the Zagros Mountains and miserable the land to the southwest of them. Within this trench, the rivers Tigris and Euphrates and their tributaries had laid down huge portions of alluvial sediments, forming the Lower Mesopotamian Plain (alluvial Mesopotamian Plain). The Tigris and

Euphrates rivers are also important for the human existence of the region! For farmers, the rivers are important sources of irrigation water. The rivers additionally performed a vital function in exchange and trade and served as the principal arteries for transporting goods. So, it can be visible that nature performed the function of a catalyst. Cross boundaries additionally performed a vital function in inheriting the socio-political lifestyle from outside Mesopotamia.

- **Effect of people on the environment in Mesopotamia** – The archaeological landscape of Mesopotamia is unique because it is a record of thousands of years of complex human-environment interactions. Its river systems especially have been subject to both natural and human influences. Agriculture has been said hand in hand with civilization. The environmental impact of the Sumerians in the southern part of the fertile, crescent, the first civilization, resulted from agricultural and urban development. The growth of cities could not have happened without a sophisticated system of food production which had 4 requirements:
 - Supply of fertilizers (in the main silt).
 - A predictable float of irrigation water for crops (which required complicated engineering and a management device).
 - Adequate storage for harvested crops.
 - Agricultural planning for the Sumerians this included blanketed an elaborate calendar.
 - Upper Mesopotamia, additionally referred to as the Jazira, is the vicinity among the Euphrates and the Tigris from their sources right all the way down to Baghdad. Lower Mesopotamia is the vicinity of Baghdad to the Persian Gulf. So, it is important to note that upper Mesopotamia is more fertile than the lower one. Because of irrigation, southern Mesopotamia became wealthy in agricultural products. Mesopotamia exchange grew at the start from the crossroads nature of the civilization that dwelt among the rivers and the fertility of the land. On the other hand, trade is not only the exchange of goods but the exchange of cultures. Mesopotamians traded throughout the Mediterranean, modern-day Iran, Asia, Arabia and India (Indus Valley Civilization). It may be believed that the Mesopotamian civilization declined because of natural calamities.
- Petra - Petra is a city in southern Jordan which is also known to its inhabitants as Raqmu. Petra lies around Jabal-Al-Madbah in a basin adjoining mountains that formed an eastern part of the Arabah valley that ranging from the Dead Sea to the Gulf of Aqaba. The region around Petra had been dwelled with by the Nabataeans as early as 7,000 BC and might have consolidated in what would have grown as the capital city of their Kingdom in the 4th century BC. The Nabataeans earned considerable revenue from their trading business gained and Petra became the focal point of their wealth. Best civil engineering practices were pondered with the aid of using the technically advanced water delivery and distribution machine of the Nabataean town in southwestern Jordan. Terrace farming is one of the important essential traits of Petra. The citizens of Petra have been skillful in harvesting rainwater, agriculture, and stone carving. Petra flourished in the 1st century AD, whilst its well-known Khazneh structure – believed to be the tomb of Nabataean King Aretas IV was built and its population skyrocketed to 20,000 inhabitants. Petra was won over by the Romans, who took control over Nabataea and renamed it to Arabia Petrae. Emergence of sea trade routes and the destruction of many structures due to an earthquake in 363A.D. led to the

decline of Petra's importance. In Byzantine technology numerous Christian church buildings have been built, however, the town continued to decline, and everyone except a few nomads abandoned it by the early Islamic era. It may be seen that external factors played an important role in declining this city. It came to the knowledge of the world when it was rediscovered by Johann Ludwig Burckhardt in 1812.

Easter Island is precisely aligned alongside an immediate line across the center of Earth, with the Nazca lines - Ollantaytambo and the Great Pyramid of Egypt. Mohenjodaro, the ancient capital city of the Indus Valley Civilisation, lost city of Petra are among the world wonders that are within 0.1degree of this alignment. The ancient Sumerian city of Ur and Angkor temples in Cambodia and Thailand are also within one degree of latitude of this alignment.

CONCLUSIONS

An evolving understanding of the complexity, magnitude and inter-relatedness of global environmental history leads drive us to the conclusion that a new balance of research awaits programs. This report describes a framework for conducting research that will help alleviate the problems of the moment while providing a basis for solving tomorrow's problems. In this paper, it can be seen how these 3 ancient mysterious cities - Easter Island, Ancient Mesopotamia and Petra advanced – agriculturally and technically but due to the natural calamities declined in a way. The four essential elements of global, history environmental – Nature, Interdisciplinarity, Culture Forging and Cross boundaries affected and made a deep impact on these cities. So, it may be concluded that essential elements of global environmental history and these three case studies (Petra, Easter Island, Mesopotamia) are interlinked with each other, in that the 4 elements played an important role as a catalyst in the life of Petra, Easter Island and Mesopotamia. So, it may be inferred that Global Environmental History is the historicized portion of the story encompassing the lives of humans, societies, and species, both human and non-human, with respect to the various aspects of their relationship with the physio-biological environment.

ACKNOWLEDGEMENTS

I wish to record my sense of gratitude and profound thanks to my professor, Vipul Singh, PhD., Professor of Early Modern & Environmental History, Department of History, University of Delhi, India; for his lectures, guidance, encouragement and support during my Master's Degree which prompted me to work on this topic of research.

REFERENCES

1. Bauval, R. (2007). *The Egypt Code*. Ireland: Red Wheel Weiser.
2. Diamond, J. (2013). *Collapse: How Societies Choose to Fail Or Survive*. United Kingdom: Penguin Books Limited
3. Myllyntaus, Timo. (2011). *Thinking Through the Environment: Green Approaches to Global History*. (2011). United Kingdom: White Horse Press
4. Ortloff, Charles. (2005). *The Water Supply and Distribution System of the Nabataean City of Petra (Jordan), 300 BC– AD 300*, Cambridge Archaeological Journal.
5. Peiser, Benny. (2005). *From Genocide to Ecocide: The Rape of Rapa Nui*. Energy & Environment. 16. 513-539.
6. Pollock, S. (1999). *Ancient Mesopotamia: the Eden that never was*. United Kingdom: Cambridge University Press.
7. StewartA, Mart. (1998). *Environmental History: Profile of a Developing Field*, Society for History Education pp. 351-368
8. Van De Mieroop, M. (2015). *A History of the Ancient Near East, Ca. 3000-323 BC*. Germany: Wiley

9. Walker, M. J., Lowe, J. J. (2014). *Reconstructing Quaternary Environments*. United Kingdom: Taylor & Francis.
10. Worster, Donald. (1982). *World Without Borders: The Internationalising of Environmental History*, Oxford University Press, pp. 8-13
11. Worster, Donald. (1988). *The Ends of the Earth: Perspectives on Modern Environmental History*. (1988). United Kingdom: Cambridge University Press.
12. Verma, Mitali, and Rajeshwari C. Patel. "Uniting The Beings: The Journey Of Yeats From 'i' TO 'I'." *International Journal of English and Literature (IJEL)* Vol. 4.6, Dec 2014, 79-88 © TJPRC Pvt. Ltd.
13. Lestari, Noor Dwi Indah, and Apol Pribadi Subriadi. "EdTech Investment: Optimism, Pessimism, and Uncertainty." 2021 International Conference on Electrical and Information Technology (IEIT). IEEE, 2021.
14. Katana, N. "Redefining History In Toni Morrison's Paradise." *International Journal of English and Literature (IJEL)* 3 (2013): 103-108.
15. Irshad, Ms Shaista, and Rashmi Gaur. "Construction of Sex, Gender and Class in Margaret Atwood's Alias Grace." 117-126. *International Journal of English and Literature (IJEL)* Vol. 3.2, Jun 2013, 117-126 © TJPRC Pvt. Ltd.